

1 **WHAT IS CLAIMED IS:**

2 1. A tool holding and working piece-clamping assembly for a machine
3 with a tool, the tool holding and working piece-clamping assembly comprising:
4 a stand with a top adapted to be securely connected to the machine;
5 a driving device mounted on the top of the stand;
6 a threaded rod rotatably mounted on the stand and driven by the driving
7 device;
8 a rail assembly mounted on the stand and parallel to the threaded rod;
9 a brake post mounted on the stand and parallel to the threaded rod;
10 a working piece-clamping device with an upper clamping device
11 slidably connected to the rail assembly and a lower clamping device
12 corresponding to the upper clamping device and adapted to be secured on the
13 machine, and the working piece-clamping device further comprising:
14 a connecting plate connected to the rail assembly;
15 an upper base attached to the connecting plate for the upper
16 clamping device being attached to the upper base;
17 a contact switch with an actuating arm mounted on the connecting
18 plate; and
19 a brake electrically connected to the contact switch and slidably
20 mounted on the brake post; and
21 a tool holding device slidably connected to the rail assembly and
22 comprising:
23 a connecting base slidably connected to the rail and screwed with
24 the threaded rod;

1 at least one pushing block mounted on the connecting base and
2 corresponding to the connecting plate;

3 an actuating block attached to the connecting base and aligning
4 with the actuating arm of the contact switch; and
5 a moving base attached to the connecting base, located between
6 the upper clamping device and the lower clamping device and adapted for the
7 tool being mounted on the moving base.

8 2. The tool holding and working piece-clamping assembly as claimed in
9 claim 1, wherein the rail assembly comprises two rails attached to the stand and
10 respectively located at two sides of the threaded rod.

11 3. The tool holding and working piece-clamping assembly as claimed in
12 claim 2 further comprising an upper slider attached to each respective rail for the
13 connecting plate being attached between the upper sliders.

14 4. The tool holding and working piece-clamping assembly as claimed in
15 claim 2 further comprising a lower slider attached to each respective rail for the
16 connecting base being attached between the lower sliders.

17 5. The tool holding and working piece-clamping assembly as claimed in
18 claim 1 further comprising a housing for the stand secured thereto adapted be
19 secured on the machine,

20 wherein the housing has a window with a top end and a bottom end for
21 the upper base and the moving base moveably extending through the window.

22 6. The tool holding and working piece-clamping assembly as claimed in
23 claim 5, wherein the working piece-clamping device further comprises a lower
24 base attached to the housing for the lower clamping device being mounted on the

- 1 lower base.
- 2 7. The tool holding and working piece-clamping assembly as claimed in
- 3 claim 6 further comprising a bellows shutter with two ends respectively attached
- 4 to the top end of the window and the upper base.
- 5 8. The tool holding and working piece-clamping assembly as claimed in
- 6 claim 6 further comprising a bellows shutter with two ends respectively attached
- 7 to the upper base and the moving base.
- 8 9. The tool holding and working piece-clamping assembly as claimed in
- 9 claim 6 further comprising a bellows shutter with two ends respectively attached
- 10 to the moving base and the lower end of the window.
- 11 10. The tool holding and working piece-clamping assembly as claimed
- 12 in claim 6 further comprising a first bellows shutter with two ends respectively
- 13 attached to the top end of the window and the upper base;
- 14 a second bellows shutter with two ends respectively attached to the
- 15 upper base and the moving base; and
- 16 a third bellows shutter with two ends respectively attached to moving
- 17 base and the lower end of the window.